**Lesson Title: Recycling and Pollution**

**Subject:** ELA with a Focus on Science

**Grade:**  5

**Time:** 3 days, 45 minutes

**Teaching Point**: Students will understand the impact of pollution and importance of recycling while completing research and working in collaborative groups.

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| **CCSS:** Reading Informational: RI 5.1, 5.2, 5.3, 5.6, 5.7, 5.9 Writing Opinion: W 5.1 a-e, W 5.5, W 5.8  **Teacher Objectives (Danielson):**  1E: Designing Coherent Instruction  2A: Creating an Environment of Respect and Rapport 3B: Using Questioning and Discussion Techniques 3C: Engaging Students in Learning  **Objectives** according to Bloom’s Taxonomy  1. **Knowledge**- Students will be able to demonstrate and understanding of ways that water is wasted.  2. **Arrange-** Students will be able to sort pictures of wasted water and conserving water into categories.  3. **Comprehension-** Students will be able to give examples of ways to conserve water. |

**Background:** In the lesson students will be taught about waste and will be introduced to the terms: reduce, reuse, and recycle. Students will be given the opportunity to determine how as a school, we can reduce waste and disposals. Students will make advertisements to promote these ideas to the school. During this 3-day lesson students will be encourages to promote reducing, reusing, and recycling throughout the school and the community. Students will also encourage a plastic bottle collection and will take part in recycling the bottles. Proceeds will go towards their senior trip. **Materials:** reduce/reuse/recycle chart, pre-organized garbage can full of recyclables, laptops, art materials to decorate recycle boxes and individual advertisements, taping device (iPad), News ELA articles, 6+1 writing rubric

**Lesson:   
Connection:** At the beginning of the lesson, dump out a trashcan full of predetermined recyclables onto a table or desk so that they whole class can see the contents. Ask students: “Should all of these items be in the trashcan?”  
Take out a blue, labeled recycle bin and together go through the items and separate what should be trash and what should be recycled (You should have planned for more recyclables than trash—mostly paper)

After completing this process compare the two bins to see how much you have taken from the trash pile. Before moving on have students complete a circle map, brainstorming everything they know about recycling and waste.

**Teaching:**   
Break the class into groups of five based on reading level. Show and display pictures of various landfills.  
  
Present the following claim to students: “Landfills and waste is a HUGE problem and action is required to help the Earth.”  
  
Give students Landfill articles and have them read independently, while doing this they should respond to the following questions:  
Why are landfills and waste a huge problem?  
Why do we need to do something about that?  
What are some possible solutions?  
Articles: <https://newsela.com/text-sets/59/pollution-its-harmful-effects>  
\*Each member should be reading an article focused on the same content but make sure to choose the Lexile level appropriate for the child  
After they have finished reading all students should share ideas they now have after reading. They should start discussing how pollution and landfills are negative, how recycling can help, and what else can be done to fix the problem.  
  
**Active Engagement:**  
Explain to the students that they will be complete a service-learning project as a group to promote Earth reducing, reusing and recycling. Tell students when they are finished with their projects they will be asked to complete an opinion writing piece responding to a claim about pollution and recycling. There will be three group activities advertisement.  
  
Project 1: Research about the Earth’s waste and what we can do to reduce it.  
Project 2: Create a bottle-recycling box for important places within the school (Library, office...).   
Project 2: Create a video as a group to promote reducing, reusing, recycling.

Remind students of their group roles to encourage active participants. Students should already be aware of their roles from previous group work. If there is confusion quickly reassign roles.  
Roles: Researcher, Reporter, Recorder, Investigator, Illustrator, and Editor

Give students about 15 to 20 minutes to research the recycling on laptops. At this point students should be looking for: statistics, examples, ideas, or anything that can help them become more aware of how important it is to recycle, reduce, and reuse. Students may be working with their group or a partner to research (sharing laptops) but should be documenting everything they are finding on their own individual thinking map.

After students have completed their research have them write a mini reflection responding to the following prompt:  
What needs to be done to make a change?   
Identify some recyclable items and what they could be turned into for everyday usage.

Give students 5-10 minutes to complete their reflection, if they are not finished by the end of the period this should be finished for homework.

**Day 2**Before the lesson make sure to have all of the supplies available.  
Supplies: 6-10 clean, medium-sized, cardboard boxes, paint, paper plates, paintbrushes, cups with water, paper towels, and lots of newspaperStudents will be creating bottle recycle boxes to be placed throughout the school. Tell students that every other week one 5th grade teacher will bring all of the bottles or cans to the grocery store and will recycle them and all proceeds will go towards their senior trip.

Have students go back to the group spots from the previous day and say:  
“You will be decorating and illustrating the cardboard boxes for bottle recycling due to that fact that lots of bottles and cans are thrown away verses being recycled. You can model your box after a normal recycling bin or come up with your own design.”

Give students an opportunity to create a plan for their project. Before they begin creating their boxes give the following direction:

Once all students are aware of the instructions and task they should get started:  
1. Have one student from each group gather a box of materials.  
2. Give the students 30 minutes to work on painting/decorating their boxes as a group.  
  
Have students log onto Socrative.com and complete the following pre-assigned exit ticket.  
Exit Ticket: How do you think recycling bins will impact our school? Why?

**Day 3:**

Today students will be planning and creating their video; they should work together to write and finalize a script for their video. While working the recorder should be documenting the plan for the video.   
All students should receive the directions below:  
Video Requirements:  
- Must be at least 45 seconds long and no longer than 2 minutes. (Quick, entertaining, and to the point)  
- Make sure to include the item you are advertising and WHY  
- Remember you audience: other students in the school

While students are working in groups: ask questions to challenge students’ abilities and give constructive criticism when needed. As groups complete their scripts, give them time to practice QUIETLY, in different sections of the class. This helps give early finishers practice and allows other students a chance to complete the assignment.

During recess or any other free time tape each groups recording (you can also have the students tape their recording in the hallway right outside of the classroom) each group should have an opportunity to practice before being taped.   
 **Share:** Once all videos are completed they should be watched in the classroom for viewing/critiquing/share. Students will be asked to give each group a “glow-&-grow” pointing out what their classmates did really well and what they would change and why.

**Assessment**: After this 3-day lesson students should use everything they have learned and all of their resources (News ELA articles, research) to write an opinion essay responding to the following claim:  
  
Claim: Landfills and waste is a HUGE problem and action is required to help the Earth. Do agree or disagree? Provide reasons and evidence to support your opinion.

**Differentiation:**ESL-  
When reviewing directions with the class write directions on the board and provide picture support  
Show examples of what you expect from the students.   
Provide extra time to complete assignments  
Provide one-on-one time, or group assistance in brainstorming, writing, and creation phase of students.  
Instead of writing a short paragraph for reflection, consider having student write a few sentences or make an illustration.

Enrich-  
Create graphs or charts with statistical research found within group  
Lead students in the thought process of the script for their advertisements  
Allow students to generate a school plan to decrease waste.

**Homework:** Introduce recycling at home and see how it impacts your home environment, write reflections each week.